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U.S. POSTAL SERVICE

Clear Communication with Employees Needed before Reopening the Brentwood Facility

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U.S. POSTAL SERVICE

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Highlights

Highlights of GAO-04-205T, a testimony before the Committee on Government Reform, House of Representatives

Why GAO Did This Study

On October 21, 2001, the U.S. Postal Service closed its Brentwood mail processing facility after the Centers for Disease Control and Prevention (CDC) confirmed that an employee there had contracted inhalation anthrax, an often-fatal form of the disease. On October 21 and 22, two other Brentwood employees died of inhalation anthrax. The contamination was linked to a letter that passed through the facility on or about October 12, before being opened in the office of Senator Daschle (see fig.) in the Hart Senate Office Building on October 15. The Hart Building was closed the next day. The Brentwood facility has since been decontaminated and will soon reopen. This testimony, which is based on ongoing work, provides GAO's preliminary observations on the decisions made in closing the facility and problems experienced in communicating with employees, as well as lessons learned from the experience.

What GAO Recommends

Because the Postal Service agreed to inform Brentwood employees before the facility is reopened that it could not guarantee that the facility is completely risk free, GAO is making no recommendations at this time.

www.gao.gov/cgi-bin/getrpt?GAO-04-205T.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Bernard L. Ungar at (202) 512-2834 or ungarb@gao.gov.

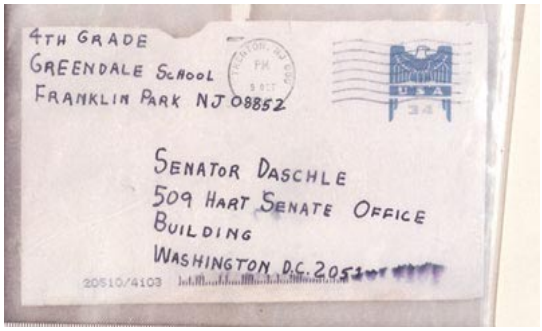
What GAO Found

The Postal Service's decision to wait to close the Brentwood facility and refer employees for medical treatment until CDC confirmed that a postal employee had contracted inhalation anthrax was consistent with the advice the Postal Service received from public health advisers and the information about health risk available at the time. However, because circumstances differed at Brentwood and the Hart Building—an observed spill at the Hart Building and no observable incident at Brentwood—the Postal Service's response differed from the response at Capitol Hill, leading some Brentwood employees to question whether the Postal Service was taking adequate steps to protect their health.

The Postal Service communicated information to its Brentwood employees during the anthrax incident, but some of the health risk information changed over time, exacerbating employees' concerns about the measures being taken to protect them. Notably, employees later learned that their risk of contracting the disease was greater than originally stated. Other factors, including difficulties in communicating the uncertainty associated with health recommendations and employees' distrust of postal managers, also challenged efforts to communicate effectively. Recently, the Postal Service informed employees that Brentwood, which has been tested and certified as safe for occupancy, is "100 percent free of anthrax contamination." However, in discussions with GAO, the Service agreed to revise future communications to acknowledge that although any remaining risk at the facility is likely to be low, complete freedom from risk cannot be guaranteed.

The Postal Service and others have learned since the 2001 anthrax incidents that (1) the risk of contracting anthrax through the mail is greater than was previously believed and more caution is needed to respond to that greater risk and (2) clear, accurate communication is critical to managing the response to an incident and its aftermath. The Postal Service is revising its guidance to respond more quickly and to communicate more effectively to employees and the public in the event of a future incident.

Anthrax-Contaminated Letter Opened in Hart Building on October 15, 2001



Source: Federal Bureau of Investigation.

Mr. Chairman and Members of the Committee:

We are pleased to be here to discuss issues related to the U. S. Postal Service's response to the anthrax[1] contamination at the Washington D.C. Processing and Distribution Center, or Brentwood, as it was commonly known.[2] As you know, the facility was renamed the Joseph Curseen Jr. and Thomas Morris Jr. Processing and Distribution Center in memory of the two Brentwood employees who died of inhalation anthrax on October 21 and 22, 2001. Inhalation anthrax is the most lethal form of the disease. The facility is about to reopen after being closed 2 years ago this week for decontamination and renovation. My testimony today will focus on the (1) decisions made by the Postal Service in closing the Brentwood facility and (2) problems the Postal Service experienced in communicating to its employees as well as (3) lessons that can be learned from the experience. While you also asked us to address the effectiveness of the facility's decontamination, we are unable to do so because this issue is outside the scope of work that we have under way. However, we will relay our observations about communication issues associated with the facility's decontamination.

My testimony today is based largely on our ongoing work addressing the treatment of postal employees at several postal facilities, including the Brentwood facility, that were contaminated with anthrax spores in late 2001. This work, which we expect to complete within the next several months, is being done at the request of Senator Joseph I. Lieberman and Representatives Christopher H. Smith and Eleanor Holmes Norton. Our work thus far has involved interviews with individuals involved in the response to the contamination, including representatives from the Postal Service, the Department of Defense, the Centers for Disease Control and Prevention (CDC), and state and local public health agencies and postal unions as well as reviews of relevant documents and literature related to the anthrax response. We are also drawing from our completed work addressing anthrax contamination at a postal facility in Connecticut,[3] issues related to the testing for anthrax in that facility,[4] and the public health response to the 2001 anthrax incidents.[5] Our work is being performed in accordance with generally accepted government auditing standards. The observations that we are making are based on our ongoing work and should be viewed as preliminary.

Before I discuss the decisions made in closing the Brentwood facility, let me briefly place these decisions in context. When the Postal Service learned that a letter contaminated

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[1] Technically, the term "anthrax" refers to the disease caused by *Bacillus anthracis* and not the bacterium or its spores. In this report, we use the term "anthrax" for ease of reading and to reflect terminology commonly used in the media and by the general public.

[2] In this report, we refer to the facility as Brentwood.

[3] U.S. General Accounting Office, *U.S. Postal Service: Better Guidance Is Needed to Improve Communication Should Anthrax Contamination Occur in the Future,* GAO-03-316 (Washington, D.C.: Apr. 7, 2003).

[4] U.S. General Accounting Office, *U.S. Postal Service: Issues Associated with Anthrax Testing at the Wallingford Facility,* GAO-03-787T (Washington, D.C.: May 19, 2003).

[5] U.S. General Accounting Office, *Bioterrorism: Public Health Response to Anthrax Incidents of 2001,* GAO-04-152 (Washington, D.C.: Oct. 15, 2003).

with anthrax spores had been sent through the mail and opened in the office of Senator Daschle within the Hart Senate Office Building (Hart Building) on October 15, 2001, the Postal Service reports that it immediately understood that the letter passed through its Brentwood facility. However, at that point, the risk of contamination and its consequences at the facility were uncertain. The Postal Service sought advice and guidance from CDC and the District of Columbia (D.C.) Department of Health, provided information to its employees, arranged for environmental tests of the facility, and provided some protective equipment, but it did not close the facility or refer the facility's employees for medical treatment until October 21, when CDC confirmed that a Brentwood employee had inhalation anthrax. The Postal Service's actions contrasted with those taken by the Attending Physician for the U.S. Capitol—the individual responsible for the health of public officials and other congressional employees on Capitol Hill. The Attending Physician decided to make antibiotics available to the most directly exposed congressional employees on the same day the contaminated letter was opened and advised closure of the Hart Building the following day.

In summary:

The Postal Service's decision to wait for CDC's confirmation of a case of inhalation anthrax before closing Brentwood and referring its employees for medical treatment was consistent with the advice it received from CDC and the D.C. Department of Health as well as the information about health risk available at the time. However, the decision raised questions among Brentwood employees about whether their health was being adequately protected. At the time, CDC advised waiting for such confirmation before recommending closing a facility or recommending medical treatment because CDC and local public health authorities believed it unlikely that postal employees could contract inhalation anthrax from exposure to contaminated mail. The Postal Service's decision differed from the decision to close the Hart Building, in large part, because there was an observable incident of anthrax contamination there—which was immediately recognized as a potentially high-risk situation—whereas there was no observable incident at Brentwood. However, even before CDC confirmed the first case of inhalation anthrax at Brentwood, some Postal Service employees questioned whether the Postal Service's actions adequately protected their health.

The Postal Service communicated health risk and other information to its Brentwood employees during the anthrax incident, but some of the information it initially provided changed as public health knowledge evolved—exacerbating employees' concerns about the adequacy of the measures being taken to protect them. Most significantly, employees later learned that their risk of contracting the disease was greater than originally stated. Other factors, including difficulties in communicating the uncertainty associated with health recommendations, the appearance of disparate treatment between Brentwood and congressional employees, and employees' long-standing distrust of postal managers, also challenged efforts to communicate effectively. According to postal managers, the Postal Service has made additional efforts to communicate with Brentwood employees since the facility's closure, but challenges remain, including before the facility opens to clearly communicate the impossibility of eliminating all risk of contamination from the environment. Recently, for example, the Postal Service informed employees that

Brentwood, which has been tested and certified as safe for occupancy, is "100 percent free of anthrax contamination." However, following discussions with us about the impossibility of eliminating all risk of contamination, the Service agreed to revise future communications to acknowledge that although any remaining risk at the facility is likely to be low, complete freedom from risk cannot be guaranteed.

The Postal Service, CDC, and others have learned a great deal from the 2001 anthrax incidents and have taken various steps to address the problems that occurred and to enhance their preparedness for any future incidents. One of the lessons learned is that the risk of employees contracting anthrax through the mail is greater than was previously believed and more caution is needed to respond to that greater risk. Another important lesson learned is that clear and accurate communication to employees is critical to managing the response to an incident and its aftermath. The Postal Service, CDC, and others have taken steps to revise their guidance to respond more quickly in the event of a future anthrax incident and to communicate more effectively about such an incident with employees and the public. The Postal Service told us that it would inform Brentwood employees prior to opening the Brentwood facility that while the facility is safe for occupancy, it is impossible to guarantee that it is risk free.

Background

Anthrax is an acute infectious disease caused by the spore-forming bacterium called *Bacillus anthracis*. The bacterium is commonly found in the soil and forms spores (like seeds) that can remain dormant for many years. Although anthrax can infect humans, it occurs most commonly in plant-eating animals.

Human anthrax infections are rare in the United States and have normally resulted from occupational exposure to infected animals or contaminated animal products, such as wool, hides, or hair. Infection can occur in three forms, two of which are relevant to this testimony. They are (1) cutaneous, which usually occurs through a cut or abrasion[6] and (2) inhalation, which results from breathing aerosolized anthrax spores into the lungs.[7] Aerosolization occurs when anthrax spores become airborne, thus enabling a person to inhale the spores into the lungs. After the spores enter the body, they can germinate into bacteria, which then multiply and secrete toxins that can produce local swelling and tissue death. The symptoms are different for each form of infection and are thought to appear within about 7 days of exposure, although individuals have contracted inhalation anthrax as long as 43 days after exposure. Depending on the extent of exposure and its form, a person can be exposed to anthrax without developing an infection. Before the 2001 incidents, the fatality rate for inhalation anthrax was approximately 75 percent, even with appropriate antimicrobial medications.[8] People coming in contact with anthrax in its natural environment have generally not been at risk for inhalation anthrax,

[6]Cutaneous means of, relating, to or affecting the skin. Cutaneous anthrax is characterized by lesions on the skin.

[7]The third form of anthrax infection is gastrointestinal, which results from ingesting undercooked contaminated meat.

[8]An antimicrobial medication either kills or slows the growth of microbes. Antibiotics are an example of antimicrobial medications.

and before 2001, no cases of inhalation anthrax had been reported in the United States since 1976, although 224 cases of cutaneous anthrax were diagnosed between 1944 and 1994.[9] Fatalities are rare for cutaneous anthrax.

Because so few instances of inhalation anthrax have occurred, scientific understanding about the number of spores needed to cause the disease is still evolving. Before the 2001 incidents, it was estimated that a person would need to inhale thousands of spores to develop inhalation anthrax. However, based on the cases that occurred during the fall of 2001, experts now believe that the number of spores needed to cause inhalation anthrax could be very small, depending on a person's health status and the aerosolization capacity of the anthrax spores.

In total, the contaminated letters caused 22 illnesses and resulted in 5 deaths from inhalation anthrax. Numerous postal facilities were also contaminated. The first two cases of disease involved media employees in Florida. The employees—one of whom died—contracted inhalation anthrax and were thought to have contracted the disease through proximity to opened letters containing anthrax spores. Media employees also developed anthrax in New York—the second location known to be affected. The initial cases in New York were all cutaneous and were also thought to have been associated with opened envelopes containing anthrax spores. The initial cases at the next site—New Jersey—involved postal employees with cutaneous anthrax. The postal employees were believed to have contracted the disease through handling the mail—as opposed to opening or being exposed to opened letters containing anthrax spores. Unlike the incidents at other locations, which began when cases of anthrax were detected, the incident at the Hart Building—the fourth location—began with the opening of a letter containing anthrax spores and the resulting exposure to the contamination. The discovery of inhalation anthrax in the first postal worker from Brentwood revealed that even individuals who had been exposed only to taped and sealed envelopes containing anthrax could contract the inhalation form of the disease. Subsequent inhalation cases in Washington, D.C.; New Jersey; New York; and Connecticut—the sixth location affected—underscored that finding and also demonstrated that exposure and illness could result from cross contamination of mail.[10] (See app. I for a time line of selected events related to the anthrax incident in the fall of 2001.)

On or about October 9, 2001, at least two letters containing anthrax spores entered the U.S. mail stream—one was addressed to Senator Thomas Daschle, the other to Senator Patrick Leahy. The letters were mailed in Trenton, New Jersey, and forwarded to the Brentwood facility in Washington, D.C., where they were processed on high-speed mail sorting machines and further processed in the facility's government mail section before delivery.[11] On October 15, a staff member in Senator Daschle's office opened the contaminated envelope. The envelope contained a powdery substance, which the

[9]Journal of American Medical Association, *Anthrax as a Biological Weapon: Medical and Public Health Management,* May 12, 1999. Volume 281, No. 18.

[10]Cross contamination occurs when other pieces of mail or equipment come in contact with the original source of the anthrax.

[11]The letter addressed to Senator Leahy was never delivered. Instead, it was recovered in November 2001 in mail that had been quarantined on Capitol Hill on October 17, 2001.

accompanying letter identified as anthrax, that was released in a burst of dust when the envelope was opened. The U.S. Capitol Police were notified, and the substance was quickly tested and confirmed to be anthrax. Brentwood managers analyzed the path of the letter through the facility. Although the machine that processed the letter was reportedly shut off—at least for a period of time—the facility itself was not closed or evacuated at that time. Within days, a Brentwood employee was suspected of having contracted inhalation anthrax. The Postal Service closed the facility on October 21, 2001, after CDC confirmed that the employee had the disease. Thereafter, two other Brentwood employees, Mr. Curseen, Jr., and Mr. Morris, Jr., died. Both were subsequently found to have died of inhalation anthrax.

The Brentwood facility is a large 2-story facility that operated 24 hours a day, 7 days a week. About 2,500 employees worked at Brentwood, processing mail on one of three shifts. Brentwood processed all the mail delivered to addresses on Capitol Hill, including the Hart Building. Brentwood was the second processing and distribution center closed for an extended period because of anthrax contamination. The Postal Service reported that it plans to reopen the facility in phases; by late November administrative personnel will begin working in the facility and limited mail processing operations will begin shortly after that. Brentwood is expected to be fully operational by spring 2004. The other facility—the Trenton Processing and Distribution Center—located in Hamilton, New Jersey, was closed 3 days before Brentwood on October 18, 2001, after CDC confirmed that a New Jersey postal employee had cutaneous anthrax. It is in the process of being decontaminated.

Brentwood Employees Questioned Whether the Decision to Wait for Confirmation of Inhalation Anthrax Adequately Protected Their Health

The Postal Service's decision to wait for CDC's confirmation of a case of inhalation anthrax before closing Brentwood and referring the facilities' employees for medical treatment was consistent with the public health advice the Postal Service received and the health risk information available at the time. However, the Postal Service's decision contrasted with the more immediate decision to close the Hart Building after anthrax contamination occurred. As a result, postal employees questioned whether the Postal Service's decision adequately protected their health.

The Postal Service's Decision Was Based on CDC's Advice and Available Health Risk Information

The Postal Service's decision to wait for CDC's confirmation of a case of inhalation anthrax before closing Brentwood and referring its employees for medical treatment was consistent with the advice provided by CDC and the D.C. Department of Health, as well as the available health risk information. CDC called for such confirmation before closing a facility or recommending medical treatment because, at the time, public health authorities believed postal employees were unlikely to contract inhalation anthrax from exposure to contaminated mail. Postal officials reported that they consulted CDC and the D.C. Department of Health about the possible health risks to Brentwood employees after learning that Senator Daschle's letter—opened on October 15, 2001—contained

anthrax. Even though the letter would have passed through Brentwood, the public health authorities said that they did not consider the facility's employees at risk, given the results of ongoing investigations of anthrax incidents in Florida and New York and the scientific understanding at that time. Specifically, as discussed, no postal employees were known to have developed symptoms of anthrax after contaminated letters had passed through the postal system on the way to destinations in Florida and New York, and anthrax spores were not considered likely to leak out, or escape from, a taped and well-sealed envelope in sufficient quantities to cause inhalation anthrax. Accordingly, the Postal Service reported that it kept the Brentwood facility open in order to keep the mail moving. This goal was important to managers whom we interviewed, who cited the psychological importance of keeping the mail flowing in the aftermath of the September 11 terrorist attacks.

On October 18, 2001, CDC confirmed that a postal employee in New Jersey had cutaneous anthrax. On that day, the Postal Service, in consultation with the New Jersey Department of Health and Senior Services**,** closed the Trenton Processing and Distribution Center. According to New Jersey public health officials, the facility was closed to facilitate environmental testing of the Trenton facility. While the contaminated letters to Senator Daschle and Senator Leahy were both processed through the Trenton and Brentwood facilities, it is not clear why the Postal Service did not take the same precautionary measures at Brentwood. We are pursuing this issue as part of our ongoing work.

Although the Postal Service followed CDC's advice and kept Brentwood open until CDC confirmed a case of inhalation anthrax, the Postal Service took interim steps to protect its employees. First, the Postal Service arranged for a series of environmental tests at the Brentwood facility, even though it reported that CDC had advised the Postal Service that it did not believe such testing was needed at that time. The results of the first test—taken and available on October 18, 2001—were from a quick test conducted by a local hazardous materials response team. The results were negative. Three days later, on October 21, 2001, CDC confirmed that a Brentwood employee had inhalation anthrax, and the Postal Service closed the facility and referred its employees for medical treatment. The positive results of more extensive environmental testing—also conducted on October 18, 2001—were not available until October 22—after the facility had already closed. In addition, Postal Service managers said they asked the D.C. Department of Health three times before October 21 for nasal swabs and antibiotics for Brentwood employees; however, the health department said the swabs and antibiotics were unnecessary. We have not yet been able to confirm this information with the D.C. Department of Health. Finally, the Postal Service took actions to protect its employees from low-level environmental risks. For example, it provided protective equipment such as gloves and masks and, according to postal managers, shut down the mail-sorting machine that processed the Daschle letter, at least for a time. Additionally, the Postal Service provided information on handling suspicious packages and required facility emergency action plans to be updated.

In 1999, the Postal Service developed guidance for responding to anthrax and other hazardous incidents. The guidance, which was developed in response to hundreds of

hoaxes, includes steps for notifying first responders, evacuating employees, and providing information and medical care to employees. The Postal Service reported that the guidance deals with observable events—specifically, spills—not events that are not observable, such as aerosolization of powders. As a result, the Postal Service said that it did not view the guidance as being applicable to the situation that occurred at Brentwood.

Given that the situation at Brentwood differed from the situation contemplated in its guidance, the Postal Service sought advice from CDC and others. According to CDC officials, the health and safety of postal employees was always the first concern of postal managers during discussions with CDC. Furthermore, they said that the Postal Service was receptive to their advice about the need to close Brentwood to protect postal employees after a diagnosis of inhalation anthrax was confirmed.

The Decisions Made at Brentwood and Capitol Hill Differed Because the Circumstances and Decisionmakers Differed

The Postal Service's decision to wait for a confirmed case of inhalation anthrax before closing the facility and referring employees for medical treatment differed from the decision to implement precautionary measures immediately after anthrax contamination was identified at the Hart Building. The decisions differed, in part, because there was an observable incident at the Hart Building, but not at Brentwood. In addition, different parties made the decisions. At Brentwood, the Postal Service made the decision in consultation with CDC and the D.C. Department of Health. These parties were not involved in the decision-making at the Hart Building. Instead, because the Hart Building is one of many congressional offices surrounding the U.S. Capitol, the Attending Physician for the U.S. Capitol—who functions independently from the District of Columbia—provided advice and made decisions about how to deal with the contamination there.[12]

The incident at the Hart Building was immediately viewed as high risk to employees there because the envelope opened in Senator Daschle's office contained a visible white powder that the accompanying letter identified as anthrax, which was quickly confirmed by testing of the substance. Consequently, the Office of the Attending Physician of the U.S. Congress arranged for congressional employees to receive antibiotics immediately and advised closure of the Hart Building the following day.

Since 2001, the Postal Service has developed new guidance to address security risks in the mail. Its *Interim Guidelines for Sampling, Analysis, Decontamination, and Disposal of Anthrax for U.S. Postal Service Facilities*—first issued in November 2001—states that postal facilities will be closed if a confirmed case of inhalation anthrax is identified or when evidence suggests that anthrax has been aerosolized in a postal facility. The Postal Service said that it plans to complete an update to these guidelines soon, and we

[12] The Office of the Attending Physician, U.S. Congress, is an office of the U.S. Navy. It serves as the local health department for Capitol Hill and is responsible for about 30,000 public officials and other congressional staff, as well as tourists, on Capitol Hill.

plan to determine whether the new guidelines will adequately address the situation that occurred at Brentwood as part of our ongoing work. In addition, the Postal Service has tested and begun to install new biodetection technology in postal facilities. This technology is designed to enhance safety by quickly identifying unobservable evidence of aerosolized anthrax, thereby allowing for a prompt response. We plan to review the guidance associated with this technology as we complete our work.

Communication Problems Exacerbated Postal Service Employees' Concerns

The Postal Service communicated health risk and other information to its Brentwood employees during the anthrax crisis, but some of the information it initially provided changed as public health knowledge evolved, intensifying employees' concerns about whether adequate measures were being taken to protect them. Most significantly, information on the amount of anthrax necessary to cause inhalation anthrax and the likelihood of postal employees' contracting the disease turned out to be incorrect. Other factors, including difficulties in communicating the uncertainty associated with health recommendations and employees' long-standing distrust of postal managers, also challenged efforts to communicate effectively. The Postal Service has made additional efforts to communicate with Brentwood employees since the facility's closure, but challenges remain, particularly the need to effectively communicate information on any possible residual risks.

Some Information Communicated to Postal Employees Changed

The Postal Service used a wide variety of methods to communicate information to employees;[13] however, some of the information it initially provided changed with changes in public health knowledge. For example, on the basis of the science at that time, the Postal Service and CDC initially informed employees that an individual would need to be exposed to 8,000 to 10,000 spores to contract inhalation anthrax. This view turned out to be incorrect when two women in New York and Connecticut died from inhalation anthrax in October and November 2001 without a trace of anthrax spores being found in their environments. Their deaths caused experts to conclude that the number of spores needed to cause the disease could be very small, depending on a person's health status and the aerosolization capacity of the spores.

Postal employees were also told that they were at little risk of contracting inhalation anthrax because, in the view of public health officials, anthrax was not likely to escape from a taped and well-sealed envelope in sufficient amounts to cause inhalation anthrax. In addition, on October 12, 2001, CDC issued a health advisory, which the Postal Service distributed to its employees, indicating that it is very difficult to refine anthrax into particles small enough to permit aerosolization. This information also proved to be incorrect when the U.S. Army Medical Research Institute of Infectious Diseases' analyses of the anthrax in Senator Daschle's letter in mid-October 2001 revealed that the

[13] Methods for communicating information included briefings, newsletters, fact sheets, videos played on closed circuit televisions in its facilities, and a toll-free information line. In addition, the Postal Service regularly updated its Web site and, after the facility closed, it mailed information to its employees' homes.

substance was not only small enough to escape from the pores of a taped and well-sealed envelope but also highly refined and easily dispersed into the air.[14]

Finally, an error occurred on October 10, when the Postal Service instructed employees to pick up suspicious letters and isolate them in sealed containers. The message was corrected within a few days when employees were instructed not to touch suspicious letters. Nevertheless, Brentwood employees we spoke with cited the miscommunication as an indication that the Postal Service was not concerned about their safety. As a result of these and other issues, union and management officials report lingering bitterness between Brentwood employees and postal management.

Communicating Information Proved Challenging

Communicating information proved challenging for several reasons. First, the incidents occurred in the turbulent period following the terrorist attacks of September 11, 2001, when the nation was focused on the response to those events. In addition, the anthrax incidents were unprecedented. The response was coordinated by the Department of Health and Human Services, primarily through CDC, and CDC had never responded simultaneously to multiple disease outbreaks caused by the intentional release of an infectious agent. Furthermore, when the incidents began, CDC did not have a nationwide list of outside experts on anthrax, and it had not yet compiled all of the relevant scientific literature. Consequently, CDC had to do time-consuming research to gather background information about the disease before it could develop and issue guidance. Moreover, since anthrax was virtually unknown in clinical practice, many clinicians did not have a good understanding of how to diagnose and treat it. As a result, public health officials at the federal, state, and local levels were basing their health-related actions and recommendations on information that was constantly changing. According to CDC's Associate Director for Science, National Institute for Occupational Safety and Health's, testimony before a Subcommittee of this Committee last year, CDC "clearly did not know what we did not know last October [2001] and this is the cardinal sin that resulted in tragic deaths."

Effective communications were further complicated by the evolving nature of the incidents and the media's extensive coverage of the response to anthrax at other localities. Comparing the various actions taken by officials at different points in time and in different locations confused postal employees and the public and caused them to question the consistency and fairness of actions being taken to protect them. For example, when employees at the Brentwood postal facility received doxycycline for prophylaxis instead of ciprofloxacin, they incorrectly concluded that they were receiving an inferior drug. In part, this was because the media had characterized ciprofloxacin as the drug of choice for the prevention of inhalation anthrax. Ciprofloxacin also had been used as the primary medication in earlier responses, including the response to anthrax at the Hart Building. CDC initially recommended ciprofloxacin for several reasons;[15] however, when CDC subsequently determined that the anthrax was equally susceptible

[14] According to the Postal Service, it learned the results of the Army's analysis after the Brentwood closure.

to doxycycline and other drugs, it began recommending the use of doxycycline instead.[16] The switch to doxycycline was considered desirable for a variety of reasons, including its (1) lower risk for side effects, (2) lower cost, and (3) greater availability. Local and CDC officials we spoke with told us that they were challenged to explain the switch in medications and to address perceptions of differential treatment.

Additional misunderstandings arose over the administration of nasal swabs to postal employees. Nasal swabs are samples taken from the nasal passages soon after a possible exposure to contamination to determine the location and extent of exposure at a site, but not to diagnose infection. Nasal swabs were administered to congressional employees on October 15 after the contaminated letter was opened to determine which employees might have been exposed and based on this where and how far the aerosolized anthrax spores had spread. Some Brentwood employees questioned why they did not also receive nasal swabs at this time and saw this difference as evidence of disparate medical treatment. As noted, the Postal Service reported requesting nasal swabs for its employees, but the CDC and the D.C. Department did not consider them necessary. Nasal swabs were then provided to at least some employees after Brentwood was closed on October 21. However, further confusion appears to have occurred about the purpose of the nasal swabs when employees who were tested did not receive the results of the swabs. The confusion occurred partly because the Postal Service issued a bulletin dated October 11, 2001, that incorrectly indicated that nasal swabs were useful in diagnosing anthrax and the media described nasal swabs as the "test" for anthrax. The bulletin was subsequently corrected, but the media continued to refer to the swabs as a test. Public health officials acknowledged that this confusion about the purpose of the nasal swabs created a great deal of anxiety within the postal community and the public. As a result, public health entities continued to collect the samples when people asked for them, simply to allay the individuals' fears.

Another area of confusion relates to the process used to administer the anthrax vaccine to interested postal employees. When the vaccine used by the military became available in sufficient quantities that it could be provided to others, CDC offered it to postal employees and congressional staff. While considered safe, it had not been approved for use in postexposure situations. Consequently, the Food and Drug Administration required CDC to administer the vaccine using extensive protocols related to the distribution of an "investigational new drug." These protocols required postal employees to complete additional paperwork and undergo additional monitoring which, according to some Brentwood employees, gave some employees the impression that they were being used as "guinea pigs" for an unsafe treatment. CDC officials acknowledged that

[15] The first reason for recommending ciprofloxacin was that, absent information about the strain's susceptibility to various drugs, CDC considered it most likely to be effective against any naturally occurring strain of anthrax. Also, as the newest antimicrobial available, CDC considered it less likely that terrorists would have had time to engineer a resistant strain of anthrax. Finally, the Food and Drug Administration had already approved ciprofloxacin for the postexposure prophylaxis for inhalation anthrax.

[16] The recommendation to use doxycycline also followed the Food and Drug Administration's approval of the drug for inhalation anthrax.

CDC did not effectively communicate information about the vaccine program and that, in hindsight, these deficiencies probably resulted in the "wrong perception."

CDC officials have also acknowledged that they were unsuccessful in clearly communicating the degree of uncertainty associated with the health information they were providing, which was evolving during the incidents. For example, although there were internal disagreements within CDC over the appropriate length of prophylaxis, this uncertainty was not effectively conveyed to postal employees and the public. Consequently, in December 2001, when postal employees and others were finishing their 60-day antimicrobial regimen called for in CDC's initial guidance, they questioned CDC's advice about the need to consider taking the drugs for an additional 40 days. CDC officials have since acknowledged the need to clearly state when uncertainty exists about the information distributed to the public and appropriately caveating the agency's statements.

Long-Standing Labor Relations Issues Compounded Communication Issues

CDC, local public health officials, union representatives, and postal officials told us that employees' mistrust of postal managers complicated efforts to communicate information to them. According to these parties, postal employees were often suspicious of management's motives and routinely scrutinized information they received for evidence of any ulterior motives. This view appears consistent with the results of our past work, which has identified persistent workplace problems exacerbated by decades of adversarial labor-management problems. These problems were so serious that in 2001, we reported that long-standing and adversarial labor-management relations affected the Postal Service's management challenges.[17] The need to address this long-standing issue was also raised in the July 2003 report of the President's Commission on the U. S. Postal Service.[18]

The Postal Service Has Made Additional Efforts to Improve Communication with Employees, but Challenges Remain

According to postal managers, the Postal Service has made additional efforts to communicate with the employees who were at Brentwood, including holding "town hall" meetings to explain the facility's decontamination process to postal employees and the public. The Postal Service has reported that it is also updating its 1999 guidance for responding to anthrax and other hazardous materials. At present, however, the revision of the guidance has not yet been completed and it is, therefore, unclear whether the revisions will address the issues that occurred at Brentwood. Nevertheless, the Postal Service assisted the National Response Team—a group of 16 federal agencies with responsibility for planning, preparing, and responding to activities related to the release of hazardous substances—in the development of improved guidance entitled *Technical Assistance for Anthrax Response*. This guidance provides a number of

[17] U.S. General Accounting Office, *Major Management Challenges and Program Risks: U.S. Postal Service*, GAO-01-262 (Washington, D.C.: Jan. 2001).

[18] Report of the President's Commission on the United States Postal Service, *Embracing the Future: Making the Tough Choices to Preserve Universal Mail Service*, July 31, 2003.

recommendations about communicating information during emergency situations, including the need for agencies to "admit when you have made a mistake or do not know the information."

While information on the process and outcome of decontamination efforts is technically complex and therefore challenging to present clearly to the public, the revised guidelines may be helpful in future discussions about the safety of a facility. We have not reviewed the details of the facility's decontamination or its subsequent testing and, therefore, cannot comment on the effectiveness of decontamination efforts. However, in general, discussions about the success of decontamination and any residual risk to individuals center on two related topics. The first topic entails a discussion of the degree to which contamination has been reduced, bearing in mind that all sampling and analytical methods have a limit of detection below which spores may be present but undetected. Against that backdrop, it is also important to discuss how many anthrax spores are required to infect humans and to explain that the number is variable, depending upon the route of infection (e.g., skin contact or inhalation) and the susceptibility of each individual to infection. In light of this, it is particularly important to properly communicate to Brentwood employees a clear understanding of the decontamination approach that was undertaken at the facility and the nature and extent of any residual risk there. Likewise, the Postal Service's communications to employees must be clear and unbiased to (1) clearly communicate the limitations of testing and the associated risks while, at the same time, (2) avoid inducing unnecessary fear or concern. If provided with clear and unbiased information, employees will be able to make informed decisions about their health and future employment. In this regard, the Postal Service has given employees who worked at Brentwood an opportunity to be reassigned to certain other mail processing centers in the region if they do not want to return to Brentwood.

In our view, providing complete information to employees is important for them to make informed decisions about working at Brentwood. According to recent information that the Postal Service provided to its employees, the facility, which public health authorities have certified as safe for occupancy, is "100 percent free of anthrax contamination" and there is "no remaining health risk" at the facility. This latter information is not consistent with what CDC's Associate Director for Science, National Institute for Occupational Safety and Health, told this Committee's Subcommittee on the District of Columbia in July 2002. Specifically, she said that while a science-based process can allow workers to safely return to Brentwood, it is not possible to eliminate risk entirely or to guarantee that a building is absolutely free of risk. We discussed our concerns with Postal Service officials about their characterization of the facility as completely free of anthrax contamination, and they agreed to revise their statements to indicate that it is not possible to guarantee that a building is absolutely risk free. According to the Postal Service, a misunderstanding resulted in the incorrect information being distributed to employees before the document had been fully reviewed. The Postal Service said that it would correct the information and distribute the new information to employees who worked at Brentwood within the next 2 weeks.

Lessons Learned and Implications for Reopening the Facility

The Postal Service, CDC, and others have learned a great deal from the 2001 anthrax incidents and have taken various steps to address the problems that occurred and to enhance their preparedness for any future incidents. Among the lessons learned are that the risk to employees of contracting anthrax through contaminated mail is greater than was previously believed and more caution is needed to respond to that greater risk. It is now clear, for example, that anthrax spores can be released in the air, or aerosolized, when sealed letters pass through the Postal Service's processing equipment and that a limited number of anthrax spores can cause inhalation anthrax in susceptible individuals. This increased risk of contracting inhalation anthrax indicates that decisions about closing facilities need to consider other factors as well as the presence of an observable substance, such as a powder. The Postal Service and CDC have responded to this need for greater caution by developing guidance for closing a facility that establishes evidence of aerosolization, as well as confirmation of a diagnosis of inhalation anthrax, as a criterion for closure. We have not yet evaluated this guidance to determine whether it is specific enough to make clear the circumstances under which a postal facility should be closed to adequately protect employees and the public. We recognize that developing such guidance is difficult, given that the Postal Service experiences many hoaxes and needs to accomplish its mission as well as ensure adequate protection of its employees' health.

Another important lesson learned during the 2001 anthrax incidents is that clear and accurate communication is critical to managing the response to an incident. Because the risk information that was provided to employees changed over time and some of the information was communicated in ways that employees reportedly found confusing or difficult to understand, the fears that would naturally accompany a bioterrorism incident were intensified and distrust of management, which already existed in the workplace, was exacerbated. CDC, in particular, has recognized the importance of communicating the uncertainty associated with scientific information to preserve credibility in the event that new findings change what was previously understood. In this regard, our work on the sampling and analytical methodologies used to test for and identify anthrax contamination addresses the uncertainty involved in these efforts. The Postal Service agrees that although the Brentwood facility has been tested and certified as safe for occupancy, the Postal Service cannot assert that the building is 100 percent free of anthrax contamination. Accordingly, the Postal Service stated that it would inform Brentwood employees before opening the facility that the Postal Service cannot guarantee that the building is absolutely risk free.

This concludes my prepared statement. I will be happy to respond to any questions you or other members of the Committee may have.

Contacts and Acknowledgments

Should you or your staff have any questions concerning this report, please contact me at (202) 512-2834 or Keith Rhodes at (202) 512-6412. I can also be reached by e-mail at ungarb@gao.gov. Individuals making key contributions to this testimony were Don Allison, Hazel Bailey, Jeannie Bryant, Derrick Collins, Dwayne Curry, Elizabeth Eisenstadt, and Kathleen Turner. Drs. Jack Melling and Sushil Sharma provided technical expertise.

Appendix I

Time Line of Selected Events Related to the Anthrax Incident in the Fall of 2001

Date	Events Occurring on That Date
Tuesday, 9/11/01	• Terrorist attacks on the World Trade Center and Pentagon prompt heightened concerns about possible bioterrorism.
Tuesday, 10/02/01	• In Florida, an American Media Inc. (AMI) employee is admitted to the hospital with a respiratory condition. • The Centers for Disease Control and Prevention (CDC) issues an alert about bioterrorism, providing information about preventive measures for anthrax.
Thursday, 10/04/01	• CDC and the Florida Department of Health announce that AMI employee has inhalation anthrax.
Friday, 10/05/01	• AMI employee dies of inhalation anthrax.
Monday, 10/08/01	• The Postmaster General announces that Postal Inspection Service is working with other law enforcement agencies on the Florida incident.
Wednesday, 10/10/01	• The Postal Service begins nationwide employee education on signs of anthrax exposure and procedures for handling mail to avoid anthrax infection.
Friday, 10/12/01	• In NY, the New York City Department of Health (NYCDOH) announces the confirmation of a case of cutaneous anthrax in an NBC employee. • The Postal Service says that it will offer gloves and masks to all employees who handle mail. • (On or about) Daschle letter passes through Brentwood. • Boca Raton post office, which had direct access to the AMI mail, is tested for anthrax and Palm Beach County Department of Health administers nasal swabs and offers a 15-day supply of ciprofloxacin to postal employees.
Monday, 10/15/01	• On Capitol Hill, an employee opens a letter addressed to Senator Daschle. Staff in that office, an adjacent office, and first responders are given nasal swabs and a 3-day supply of antibiotics. • In NJ, State Department of Health and Senior Services (NJDHSS) assures Trenton employees that they have a low risk of contracting anthrax. • Anthrax is confirmed at Boca Raton post office.
Tuesday, 10/16/01	• Part of the Hart Senate Office Building is closed in the morning, and the remainder of the building is closed in the evening. Over the next 3 days, all Hart building and other Capitol Hill employees who request them are given nasal swabs and a 3-day supply of antibiotics.
Wednesday, 10/17/01	• The Postal Service arranges for environmental testing at Brentwood.
Thursday, 10/18/01	• A local hazardous materials response team conducts “quick tests” of Brentwood, which are negative for anthrax. A contractor conducts more extensive testing in the evening. • Postmaster General Potter holds a press conference at Brentwood, in part to reassure employees they are at low risk. • CDC confirms cutaneous anthrax in New Jersey postal employee, and a second suspected case is identified. • In NJ, the Trenton facility is closed. Employees are sent home. • In NY, NYCDOH announces another case of cutaneous anthrax, in a CBS employee. • In Florida, the Postal Service cleans two postal facilities contaminated with anthrax spores. • CDC distributes a press release announcing that the Food and Drug Administration has approved doxycycline for postexposure prophylaxis for anthrax. • In the DC, a postal employee who works at the Brentwood facility seeks medical attention.
Friday, 10/19/01	• In NJ, the NJDHSS refers postal employees to their private physicians for medical treatment. Employees begin seeking treatment at a local hospital. • In DC, a postal employee who works at Brentwood is admitted to a hospital with suspected inhalation anthrax. • In NJ, laboratory testing confirms cutaneous anthrax in a second postal employee who works at the Trenton postal facility.

Saturday, 10/20/01	• In DC, another postal employee who works at the Brentwood facility is admitted to a hospital with a respiratory condition. • CDC arrives at the Brentwood facility to meet with Postal Service management.
Sunday, 10/21/01	• In DC, the postal employee who was admitted to the hospital on 10/19/01 is confirmed to have inhalation anthrax. • In DC, Brentwood is closed. Evaluation and prophylaxis of employees begin. • In DC, a Brentwood employee who had initially sought medical attention on 10/18/01 is admitted to a hospital with suspected inhalation anthrax and becomes the first postal employee (and second anthrax victim) to die. • In DC, another postal employee who worked at the Brentwood facility seeks medical attention at a hospital. His chest X-ray is initially determined to be normal, and he is discharged.
Monday, 10/22/01	• In DC, the postal employee who worked at the Brentwood facility and who sought medical attention on 10/21/01 and was discharged is readmitted to the hospital with suspected inhalation anthrax, and becomes the second postal employee (and third anthrax victim) to die. • In DC, prophylaxis is expanded to include all employees and visitors to nonpublic areas at the Brentwood facility. • The Postal Service learns that environmental tests of Brentwood are positive for anthrax.
Sunday, 10/28/01	• In NJ, a postal employee at Trenton is confirmed to have inhalation anthrax.
Monday, 10/29/01	• In NY, preliminary tests indicate anthrax in a hospital employee who was admitted with suspected inhalation anthrax on 10/28/01. The hospital where she works is temporarily closed, and NYCDOH recommends prophylaxis for hospital employees and visitors. • In NJ, laboratory testing confirms cutaneous anthrax in a woman who receives mail directly from the Trenton facility. The woman originally sought medical attention on 10/18/01 and was admitted to the hospital on 10/22/01 for a skin condition. • In NJ, laboratory testing confirms a second case of inhalation anthrax, in a Trenton postal employee who initially sought medical attention on 10/16/01 and was admitted to the hospital on 10/18/01 with a respiratory condition.
Wednesday, 10/31/01	• In NY, the hospital employee becomes the fourth anthrax victim to die.[b]
Friday, 11/2/01	• In NY, NYCDOH announces another case of cutaneous anthrax, in a New York Post employee.
Wednesday, 11/21/01	• In Connecticut, an elderly woman, who was admitted to the hospital for dehydration on 11/16/01, becomes the fifth anthrax victim to die.[b] • The Connecticut Department of Public Health, in consultation with CDC, begins prophylaxis for postal employees working in the Wallingford postal facility.
Friday, 12/27/01	• CDC offers the anthrax vaccine to postal employees.

Source: Information provided by U.S. Postal Service, Centers for Disease Control and Prevention, Connecticut Department of Public Health, D.C. Department of Health, Food and Drug Administration, Florida Department of Health, New Jersey Department of Health and Senior Services, New York City Department of Health, and Office of the Attending Physician of the U.S. Congress.

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